IN THE CLAIMS:

1. (Currently Amended) A method for decoding interlaced video

frames, the method comprising the steps of:

down scaling a motion vector to produce a reduced

resolution motion vector;

detecting a moving area in an interlaced video reference

frame;

modifying the reduced resolution motion vector to produce a

modified motion vector; and

retrieving pixel values from the interlaced video reference

frame according to the modified motion vector;

wherein the detecting the moving area in the interlaced video

reference frame includes:

calculating a difference between two fields at an area of the

interlaced video reference frame corresponding to the motion

vector; and

comparing the difference between the two fields to a

predetermined threshold.

2. (Original) The method of claim 1, wherein the reduced

resolution motion vector is modified so that pixels from each

field are given an equal weight while performing an

interpolation.

3. (Original) The method of claim 1, wherein the reduced resolution motion vector is modified so that the pixel values are retrieved in a correct field order.

4. (Original) The method of claim 1, wherein a vertical component of the reduced resolution motion vector is modified by changing an odd integer to a nearest even integer.

5. (Original) The method of claim 1, wherein a vertical component of the reduced resolution motion vector is modified by changing a "1/4" pixel position to a "1/2" pixel position.

6. (Original) The method of claim 1, wherein a vertical component of the reduced resolution motion vector is modified by changing a "3/4" pixel position to a "1/2" pixel position.

7. (Currently Amended) A~~The~~ method ~~of claim 1,~~ for decoding interlaced video frames, the method comprising the steps of:

down scaling a motion vector to produce a reduced resolution motion vector;

detecting a moving area in an interlaced video reference frame;

modifying the reduced resolution motion vector to produce a modified motion vector; and

N:\UserPublic\GR\US\01\us010218_amd_8-2004.doc

3

retrieving pixel values from the interlaced video reference frame according to the modified motion vector;

wherein a vertical component of the reduced resolution motion vector is modified by changing a "1/2" pixel position to the nearest odd integer position.

8. (Original) The method of claim 1, which further includes determining if frame motion compensation was performed on each macro block of a video sequence.

9. (Cancelled).

10~~9~~. (Currently Amended) The method of claim 1~~8~~, wherein the difference between the two fields is calculated by accumulating the difference between adjacent pixels of the two fields in at least one column of the area of the interlaced video reference frame.

11~~10~~. (Currently Amended) A memory medium including code for decoding interlaced video frames, the code comprising:

a code for down scaling a motion vector to produce a reduced resolution motion vector;

a code for detecting a moving area in an interlaced video reference frame;

N:\UserPublic\GR\US\01\us010218_amd_8-2004.doc

4

a code for modifying the reduced resolution motion vector
to produce a modified motion vector; and

a code for retrieving pixel values from the interlaced
video reference frame according to the modified motion vector;

wherein the code for detecting the moving area in the
interlaced video reference frame includes:

a code for calculating a difference between two fields at an
area of the interlaced video reference frame corresponding to
the motion vector; and

a code for comparing the difference between the two fields
to a predetermined threshold.

12~~11~~. (Currently Amended) A decoder, comprising:

a first path for producing residual error frames;

a second path for producing motion compensated residual
frames; and

an adder for combining the residual error frames and the
motion compensated residual frames;

wherein the second path includes:

a down scaler for producing a reduced resolution motion
vector;

a motion compensation unit for detecting a moving area in an
interlaced video reference frame, producing a modified motion

vector and retrieving pixel values from the interlaced video

reference frame according to the modified motion vector;

wherein the detecting the moving area in the interlaced video

reference frame includes:

calculating a difference between two fields at an area of the

interlaced video reference frame corresponding to the motion

vector; and

comparing the difference between the two fields to a

predetermined threshold.